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ABSTRACT

Twenty deaf students attending Rochester Institute of Technology (RIT) were interviewed to study social and academic aspects of mainstreaming. While students appreciated the opportunity to attend mainstream college classes and felt they were succeeding academically, they also experienced separation and even isolation within the mainstream class. This isolation stemmed from three major kinds of constraints, including the grouping of deaf students, the use of support services, and students' perceptions of themselves and others. In their social interactions and relationships, deaf students tended to rely on social networks of deaf peers and participate largely in deaf clubs and social activities. Their explanations for these friendship patterns included the increased opportunity presented at RIT for meeting deaf peers, the ease and comfort of interaction with deaf students, the importance of group identification, and the negative influence of social prejudice. Interviewees perceived both themselves and hearing students as lacking the motivation to pursue relationships with each other. (Author/JDD)

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ACADEMIC AND SOCIAL MAINSTREAMING: DEAF STUDENTS' PERSPECTIVES ON THEIR COLLEGE EXPERIENCES

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March, 1988

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ABSTRACT

The purpose of this project was to study social and academic aspects of mainstreaming from the perspective of mainstreamed deaf college students. Data were collected through indepth, open-ended interviews with 20 deaf students attending Rochester Institute of Technology. It was learned that, while students appreciated the opportunity to attend mainstream college classes and felt they were succeeding academically, they also experienced separation and even isolation within the mainstream class. This isolation stemmed from three major kinds of constraints, including the grouping of deaf students, the use of support services, and students' perceptions of themselves and others. Additionally, it was learned that deaf students tend to rely on social networks of deaf peers and participate largely in deaf clubs and social activities. Their explanations for these friendship patterns include increased opportunity to meet deaf peers at RIT, ease and comfort of interaction with deaf students, the importance of group identification, and the negative influence of social prejudice.

INTRODUCTION AND BACKGROUND OF STUDY

In the past two decades, there has been a movement towards "mainstreaming" disabled learners with their non-disabled peers in a variety of educational settings. PL 94-142 provides guidelines for implementation of this policy in elementary and secondary school settings. The passage of Section 504 of the Rehabilitation Act of 1973, as amended in 1974, provides federal requirements and guidelines regarding access by individuals with disabilities to postsecondary educational institutions.

In the wake of this trend, questions are being asked about the impact of mainstreaming on the academic, social, and personal growth of disabled students. In general, research has found that deaf students in mainstream programs tend to have better academic achievement than their peers in special programs (Kluwin and Moores, 1985; Mertens, in press). However, the findings are less conclusive in the areas of personal and social growth. For example, Farrugia and Austin (1980), using the Meadow/Kendall Social-Emotional Inventory for Deaf Students, report higher self-concepts for 10-to 15-year-old students in residential schools than for their peers in self-contained classes. Of particular interest is their reference to "the unwritten curriculum" (Garreston, 1977). This term is used to describe a variety of informal interactions which routinely occur between students in school, such as conversations in the halls and participation in extracurricular activities. Their data suggest that deaf students enrolled in mainstream programs have fewer opportunities to engage in these kinds of informal interactions than do their peers in residential schools for the deaf.

Other researchers, who have found more generally positive results in their studies of the social and emotional adjustment of deaf students in the mainstream, temper their conclusions with words of caution. In this vein, Ladd, Munson, and Miller (1984) studied the frequency and quality of social interaction between deaf adolescents attending secondary-level occupational education classes and their non-handicapped peers. They found that deaf students developed more frequent and reciprocal social interactions with hearing classmates over the course of the 2-year program. However, follow up interviews with parents and teachers revealed that many of these students had little or no contact with hearing friends outside the structured school environment. The authors wondered whether the lack of out-of-school

contact reflected the depth and quality of these relationships or the presence of environmental constraints, such as the distance between their homes.

Mertens and Kluwin (1986) examined several variables, including social interaction, in an effort to describe differences in the educational process within self-contained and mainstream classes. Significantly, trained observers recorded no interaction between deaf and hearing high school students in the 51 mainstream class periods they observed, which led the authors to conclude that "the espoused goal of mainstreaming to encourage interaction between hearing-impaired and normally hearing students was not achieved in the observed classrooms."

Naturalistic observations and indepth interviews were used by Saur, Layne, Hurley and Opton (1986) to identify three important "dimensions" of the mainstream classroom experience for hearing-impaired college students: participation, relationships, and feelings. They found that hearing-impaired students experienced spatial, temporal, and cultural isolation in the mainstream classroom. Additionally, they learned that classroom integration was dependent upon the interactional skills of both normally hearing and hearing-impaired students, as well as the ability of the hearing-impaired student to accept his or hear hearing loss and be accepted by others in class.

In his discussion on mainstreaming, Gresham (1986) makes the following distinction between "integration" and "placement":

> "*It is important to note the distinction between integration and placement implicit in the philosophical and practical definitions of mainstreaming. That is, one can be placed into a setting without being integrated (either instructionally or socially), but one cannot be integrated into a setting without having also been placed (p. 195).*"

Applying Gresham's discussion to the research on mainstreaming, it might be argued that many of these studies support the idea that deaf students have been successfully "placed" within mainstream educational settings without being "integrated" into them.

The purpose of this project has been to study social and academic mainstreaming as it occurs at Rochester Institute of Technology (RIT). RIT

provides deaf students with a comprehensive range of educational and social options and support services. For example, deaf RIT students are offered a selection of educational environments, ranging from the self-contained classes within the college of NTID (National Technical Institute for the Deaf) to fully mainstreamed participation within the other colleges of RIT. Those students who do register in "mainstream" RIT classes are offered a variety of support services, including certified interpreters, notetakers, and tutors.

Deaf students also have opportunities to interact socially with both deaf and hearing peers at RIT. Deaf and hearing students may live in the same dormitories, and interaction between them is encouraged and supported by trained Residence Advisors. In addition to meeting people on an individual basis through incidental and informal contact, students can participate in a variety of social organizations, including academic clubs, sororities, and fraternities. Interpreters are available for selected activities, and there are professional staff at RIT who are skilled in facilitating interaction between deaf and hearing students.

Historically, most efforts to describe and evaluate the effects of mainstreaming have been conducted from the perspective of the professionals, that is, teachers, counselors, and school administrators. There is less research which examines the impact of mainstreaming from the perspective of the deaf student (see, however, Mertens, 1986; Saur, 1983). This study takes the position that students are also experts on mainstreaming, and the goal is to learn about the mainstream college experience from their perspective. In particular, this study explores the degree to which deaf students see themselves as integrated, both academically and socially, within the college environment.

SELECTION AND DESCRIPTION OF INFORMANTS[1]

All the students solicited to participate in the study had previously been enrolled and taken courses in self-contained classes within the college of NTID at RIT and were currently students in good academic standing (that is, not on academic probation) in one of the other eight colleges of RIT.

[1]The term "informants" is used here in the sense of "a source of information," as described by Spradley (1979) in his discussion of research participants.

Attempts were made to obtain a sample that represented a range of academic majors, of oral/aural and English skills, and of mainstreaming experience prior to coming to RIT. Descriptive information regarding the sample is displayed in Table 1.

Table 1. Ranges and means on selected communication characteristics of the informant group

	RANGES	MEANS
Reading[1]	7.0-12.0	9.4
English language proficiency[2]	57-100	80
Speech intelligibility[3]	1.5-5.0	3.64
Speechreading with sound[4]	0-98	58
Manual reception[5]	1-100	64.5
Pure Tone Average[6]	37-116	87.3

The 11 male and 9 female informants who participated in the study represented 16 different majors. Seven informants had been mainstreamed in regular classes during high school, six had attended high schools for the deaf, and seven had had limited mainstreaming with most of their core courses in self-contained classrooms. While all of the informants had to have reached a certain level of English competency in order to enroll in one of the colleges of RIT, their English and oral/aural skills varied considerably. Informants were selected to reflect a crossing of high and low English skills with high and low oral/aural skills. Seven informants had relatively high English skills (California Reading scores greater than or equal to 11.0 or

[1] *Reading Comprehension Subtest of the California Achievement Tests. Range of possible scores: 5.0-12.0.*

[2] *Michigan Test of English Language Proficiency (English Language Institute, University of Michigan, 1977). Range of possible equated scores: 35-100.*

[3] *NTID Rating Scale of Speech Intelligibility (Johnson, 1976). Range of possible scores reflects a continuum from completely unintelligible (1.0) to highly intelligible (5.0) speech.*

[4] *NTID Test of Speechreading with Sound (Johnson, 1976). Scores ranging from 0-100 reflect the percentage of key words understood from CID everyday sentences received using speechreading and listening.*

[5] *NTID Test of Manual Reception (Johnson, 1976). Scores ranging from 0-100 reflect the percentage of key words understood from CID everyday sentences received through manually encoded English without voice or lip movement.*

[6] *Range of possible dB levels: 0 dB-120 dB (120 dB recorded when no response).*

Michigan Test of Language Proficiency scores greater than or equal to 85), and four of these also had high oral/aural skills (speech intelligibility and speechreading skills that would suggest minimal difficulty conversing with a hearing person in a 1-to-1 situation). Seven informants had relatively low English skills (California scores less than or equal to 7.9 or Michigan scores less than or equal to 65), and four of these also had low oral skills (skills that would make communication with a hearing person difficult without writing). The remaining six informants in the study fell into a middle group in terms of English and oral/aural skills.

METHODOLOGY

Students were contacted by letter and asked to participate in an interview study. Following this procedure, interviews were completed with twenty students, each of whom was paid $10 for the time given.

Qualitative research methods were used to collect and analyze data. Indepth, open-ended interviews (Bogdan and Taylor, 1976; Spradley, 1979) were used to learn about the mainstream experience from the perspective of the 20 informants. The interviews were semi-structured in that the same "core" topics were covered in every interview. While it was sometimes necessary to work through a topic differently within different interview situations, the core topics were the warp over which the weave of individual interviews took shape.

Core topics were organized under two broad areas of college experience. The first area focused on academic experiences at college. Core topics included in this area were classroom activities, relationships with teachers and other students, and the use of support services in mainstream classes. Social and extra-curricular activities were the focus of the second area and included the core topics of participation in social clubs, dormitory life, college friendships, and dating.

Each interview lasted between one and two hours. Informants' comments were voiced by the respondent or an interpreter holding the Comprehensive Skills Certification of the Registry of Interpreters for the Deaf. Interviews were recorded on audio tape and transcribed verbatim. Data analysis involved a detailed reading of all interview transcripts by both researchers, with the goal of identifying recurring patterns and themes

(Bogdan and Biklen, 1983). The results of this analysis are presented in the following section.

FINDINGS

In general, informants' comments regarding mainstreaming did not differ in accordance with their descriptive characteristics, and the findings will be presented for the group as a whole. These findings have been organized within this section along two major strands. The first includes descriptions of experiences in the classroom. The second focuses on informants' descriptions of social interactions and relationships with other students outside of class.

Experiences in the Classroom

Informants were asked to describe their experiences in the mainstream class. In particular, they were asked to discuss their perceptions of the degree to which they are able to fit in, or be a part of the class, as well as their perceptions of how they are doing academically.

First of all, many of the concerns expressed by informants were typical of college students, such as the difficulty of the work load and the pressure to do well, the largeness and resulting impersonal character of the classes, and the fact that many teachers do not even know their students by name. In addition, many informants cited difficulties associated with using an interpreter, particularly fatigue and eye strain. Others expressed the belief that hearing-impaired students must work harder to keep up with class work. As one person put it, "They [hearing students] just hear it and take it in so easily--they have time to write--they listen and write their notes and then they just put it aside and go off and have a party ..."

Despite these qualms, the informants in our sample were generally positive about their mainstream academic experience, especially the benefit they were deriving from it. Most said they appreciated the opportunity to enroll in the same classes as their hearing peers and acknowledged that this was due in strong part to the high level of available support, such as interpreters, tutors, and notetakers. They felt they were receiving a good education and that a degree from RIT would help them get a good job. Many expressed satisfaction with their ability to successfully compete with hearing students.

However, informants' descriptions also included a strong sense of separateness, of not being a full participant in the mainstream classroom. These comments reflect the idea that there is more to mainstreaming than the opportunity to access information and will be the focus of our discussion below. Informants' descriptions of those situations in which they experienced separation included a variety of interactions with teachers and students, such as asking and answering questions in class, working on special or group projects, participating in discussions, sharing knowledge and expertise, seeking and/or giving help, and sharing information about the course, assignments, and tests. Their perceptions of their integration into the instructional milieu of mainstream classes can be described in terms of three kinds of constraints, each of which contributes to their sense of separation from hearing students and instructors: these are the grouping of deaf students, the use of support services, and their interpretation of hearing individuals' perceptions of deaf students.

Constraint #1: The grouping of deaf students. For the informants in this study, deafness was clearly not an "invisible" condition. Rather than being able to "lose themselves in the crowd," they generally reported having a very distinct, and at times even separate, presence in the classroom. Usually, this separation is necessitated by the students' need to visually access the information presented in class; that is, they need to be able to clearly see the instructor, blackboard, and interpreter. Additionally, some informants said they sit with other deaf students for companionship or mutual support. As a result, the deaf students all sit together in front and form a physical entity that is an identifiable subset of the class, as described in the following quotation:

> "*In the classroom, you sit in rows, deaf people tend to sit up in the front on the right hand side or the front left where the interpreter sits up in front.*"

Informants noted that this physical separation influenced their integration within the classroom. For example, some informants felt that as members of the group they often received undue attention, while at other times they were ignored. The following quotations are illustrative:

"*Well, teachers can easily notice the deaf people in the group more than the hearing. There's a lot of people in the hearing. So they know the deaf because they're signing. So the teacher has a list of names and will say the names, 'The deaf are missing,' and 'There's a lot of deaf missing.*"

"*I tried to ask the teachers and... hold my hand up, but the teachers often just ignore that. Maybe the teacher isn't comfortable with the deaf group, maybe. Maybe the teacher favors the hearing crowd because the hearing can talk and the teacher can talk with them and pay attention to them. The deaf are off on the side, see.*"

The physical grouping of deaf students at the front of the class also reinforced informants' perceptions of alienation from the hearing mainstream. As one person put it, "Sometimes I wish I knew what those hearing people were doing behind me."

The separation between deaf and hearing students occurred even in small classes and labs and when students were instructed to work in small groups. Informants reported that for the most part they sat and worked with other hearing-impaired students whenever they had a chance. Again, part of this was dictated by the presence of only one interpreter. The two reasons cited as blocks to integrated group work were, first, communication difficulties and second, a perceived lack of interest on the hearing students' part to work with a deaf student because it wouldn't be worth the time and effort. The following quotations are illustrative:

"*The deaf people grouped together because of the ease of communication. So one thing I don't like is trying to communicate with more than one hearing person. I've never really liked sitting with a group of hearing people and trying to follow them. They jump back and forth. So I try to avoid that as much as possible. So in a group discussion, I prefer signing with deaf people signing.*"

> *"They [hearing students] think by watching other deaf people with deviant behavior and they don't want to be bothered with that. They think deaf people aren't smart and they're afraid it'll affect their grades like in a group project, but unfortunately, I see a lot of deaf people have better grades than the hearing people. They don't realize that."*

However, the grouping of deaf students was not without its benefits. The physical separation of deaf students in many cases led to the development of a positive group identity that often formed the basis for competition, support, and friendship. In addition, the group relieved a certain burden of responsibility often experienced by a single hearing-impaired student in a classroom. Some examples:

> *"I'd rather have about five or six deaf anyway because if they're not there, then I can ask the notetakers through them. Another reason, I don't have to pay attention to the interpreter all the time, one on one. With five, it's easy to look around. If it's one, I have to watch, you can't fall asleep, so to speak, I have to watch constantly.... If they don't show up, then maybe the interpreter's upset if I don't show up. With other students there, if they show up, then it's fine. So that makes things a little easier."*

> *"Sometimes I would understand the instructor, but I felt committed to look at the interpreter because she's there or he's there interpreting for me. So, when we have other hearing-impaired students in my class and they can pay attention to the interpreter, then I'll pay attention to the instructor."*

Constraint #2: The use of support services. In addition to a physical separation in the classroom, nearly all the informants reported a functional separation or detachment from the ongoing dynamics of the classroom associated with the use of support services. For example, while most informants felt they received much more information with an interpreter in class than they would without such support, their comments

also suggest that communication through a third party cannot compare with the direct communication enjoyed by hearing students or by deaf students in classes where the instructor signs for him or herself. Similar dilemmas were raised in discussions about other kinds of support services, including notetakers and tutors.

Moreover, informants noted that having access to information is not enough to assure full participation in the learning process. In fact, most informants said they found it difficult to go beyond the passive role of information receivers. They described themselves as limited in their classroom participation and in their interactions with teachers and hearing students. Ironically, constraints on these interactions were closely associated with the very support services that facilitated information access, that is, the use of tutors, notetakers, and most especially, interpreters.

Informants appreciated the benefit of notetakers, but some also said that not taking notes themselves distanced them from the information to be learned. For example:

> "*The interpreter is interpreting so fast, it goes right by my eyes, the notetaker doesn't have enough information written down there sometimes, then I get really stuck. Hearing people hear and understand the concept, so hear, write it down and it feels some sort of a connection to it. They feel a link with it. With the deaf where is the connection? It is tough for me to write and then hand it to me, sometimes I don't understand because I am not connected to it. If I wrote it, I would understand it better, that is difficult.*"

Informants reported limited use of tutoring services. However, those who did use tutors usually described them as more available and more likely to have skills communicating with hearing-impaired students than their classroom instructors. As a result, some informants said they would seek help from tutors rather than face difficult or strained communication with an instructor:

> "*I feel more comfortable signing up with the tutor who signs, the teacher doesn't sign. If you sign up with the teacher, it's*

more trouble. If you sign up there, then you have to also go ask for an interpreter. So that really exaggerates the situation. With the tutor, it's easier."

While tutors helped informants understand the material, their availability sometimes reinforced the sense of detachment from the instructor and the typical teaching/learning process. This detachment was even more apparent in the classroom where the interpreter came between the student and the teacher. Some examples:

"*RIT, it's just me, interpreter and teacher. I don't like that. I feel it's the same... well, I'm not a very religious person, but when the preacher is there, I know they say there's God. I don't need a priest; I can communicate with God myself. It's the same thing, that's how I feel.*"

"*Sometimes, when I talk with the teacher and the interpreter has a tough time translating from ASL to speech, you see, that's awkward. The interpreter is fine at going from speaking to ASL, that's easy. But really, I feel that the interpreter should not influence my communication relationship with the teacher. It keeps going back and forth through that person. I just don't like to use an interpreter, I would prefer to have communication with the professors on my own and develop a relationship, not to keep going through somebody else.*"

In addition to creating a barrier between the instructor and student, the reliance on interpreters was frequently seen as a constraint on classroom participation. Interpreter lag was the most frequently cited reason for not participating in discussions or asking/answering questions in class. In the following quotation, an informant describes how the time lapse between an instructor's verbal message and the interpreter's signed presentation of the message constrains his participation in class:

"*Sometimes I wonder if my questions are on the point or off the point or if that's not what he's talking about at all, he's talking*

about something else all together. It's tough to learn from the third person, through the interpreter. Interpreters are a little behind. The professor's maybe already done with that subject and starting a new subject and the interpreter's busy trying to catch up and I ask a question, oops, so, you see? I've had that happen before, I feel funny, I feel inferior."

Another constraint on participation is related to the interpreter's reverse interpreting of the student's question or response into spoken English:

Interviewer: "Is it difficult for you to ask questions in class?"
Informant: "Yeah because I'm not very happy with the interpreter. For example, I raise my hand to ask a question and I'm talking to the interpreter, then the interpreter reverses to the teacher. Sometimes, the interpreter doesn't understand me and I spell it again, and I spell it again... it's very embarrassing, the people all listening to this repetition. I get really frustrated."

Several informants noted that using an interpreter is tiring and requires total concentration. They felt that instructors were seldom aware of this and, as a result, sometimes misinterpreted the informant's behavior in class. One informant said he felt an instructor was "picking on him" in class:

Interviewer: "Do you feel that he [instructor] picks on you because you're deaf or does he pick on other students also?"
Informant: "Well, half and half. I feel he picks on me because I gave him a wrong answer and so forth, but he doesn't realize it's because I can't respond to the right answer quickly because of the interpreter. My attention span is only 15 minutes. After that, I'm really sleepy. He doesn't realize that. He thinks it's easy just to look at the interpreter, don't even have to take notes, but it's not. It's twice as hard. I think, nowadays, professors should be aware of how tiring watching an interpreter can be and they should understand more about that...."

While the technical support provided by interpreters helped students access formally presented information, these services were less successful in facilitating informal classroom interactions. Several informants noted the inability of an interpreter to bridge the deaf student's separation from the informal information exchanges and interactions in the classroom. While these exchanges were often inconsequential, this inaccessibility compounded students' feelings of isolation or separation from the group. The following quotation provides several examples of this kind of separation and the relative ineffectiveness of the interpreter in these kinds of situations:

> *Interviewer:* "*You said that sometimes you will interrupt and ask people what they were saying (during lab).*"
> *Informant:* "*A little bit. I try not to do it too much. Like during an experiment, I wanna know what's going on. I'll see people talking and I might say, "Can you tell me what you just said?" Sometimes they give me just a short, limited synopsis and not the whole story. Sometimes they say it's not important. And often, I'll ask the interpreter to interpret for me what's going on.*"
> *Interviewer:* "*How do people react when you do that?*"
> *Informant:* "*Well, they don't like to repeat it. They show a willingness, but they're put out a little bit...It depends on the situation. If I see them acting like I'm bothering them, then I just won't bother. I'll leave it. I think they're taking advantage of me a little bit 'cause I'm sort of stuck and left out. Like, if I had a deaf partner in a deaf class, I wouldn't have any problem. We could all communicate with one another and get along fine.*"
> *Interviewer:* "*Are there any other situations in school when you also feel left out like that?*"
> *Informant:* "*Oh, yeah. In hearing class, I feel left out. In one hearing class, the hearing people will get all excited about some news that goes around and there'll be all this chatter from one person or another, and I'm depending on the interpreter. Sometimes the interpreter will allow me to join their*

conversation by interpreting it, but sometimes I feel left out during class. For example, in the hearing class over at RIT I'll see people hurrying off to class and sharing news, but I'll head off to another college by myself. I don't have that many things going on. There aren't that many things to do over at RIT."

Constraint #3: Informants' Perceptions of Themselves and Others. Informants described separation associated with perceptions of themselves and interpretations of how they and other deaf individuals are viewed by others. For example, informants described not only difficulty participating in the exchange of information in the classroom, but a reluctance or hesitancy to do so. Participation was mediated by their perceptions of their competence and an assessment of how their performance would be viewed by others. Informants were frequently reluctant to participate if they felt there was a high likelihood they would make a fool of themselves. Their descriptions of conditions or concerns which could lead to such a judgment included the following: if a question was off the point, if a question or answer had already been asked or given, if a comment was difficult to interpret and/or understand and would thus require repetition, if their voice sounded funny or if they used the wrong pronunciation, and if the technical language and vocabulary were below a perceived normal-hearing student level.

In most cases, informants' concern with how they presented themselves to others was associated with their perception that hearing people look down on deaf people and consider them inferior. In this vein, an informant describes an awkward situation in class and his interpretation of this event:

"*I remember one time it was one exam, and was supposed to be really hard. I got an "A" on it. The teacher had a stack of papers and was calling out names. All the deaf people were sitting over there. When the teacher saw the grade, [he] assumed it was a hearing person. You could tell he assumed 'cause he was looking at the hearing people "John Smith!" [he called out], looking out, and I was way over here, waving my*

hand, and he didn't see me. He was looking at the hearing people. The interpreter had to say, 'He's over here.'"

In addition, some informants were plagued by the belief that their behavior was being scrutinized by hearing students. For example:

"*I can see it, like everybody is looking when I raise my hand. It's so seldom that deaf people raise their hand for a question. I'm scared to ask questions. The interpreter's willing to voice it. When I went to raise my hand, everybody was listening. I decided to talk and use my voice. I said, 'I'll just use my voice' and the interpreter offered. And they look and I feel maybe I'm just being paranoid, but I can feel people looking at me.*"

Informants' perception that hearing students were watching, judging and expecting an inferior, if not foolish, performance influenced their classroom activities in several ways. First, it constrained their participation, as described above. Some students described themselves as so unwilling to risk exposure and possible embarrassment that they would refuse to ask a question in class even when this would result in their leaving the class with an incomplete or incorrect understanding of information. For example:

"*...sometimes I'm afraid to ask the teacher because I don't want the hearing people to think badly of me. Maybe I'm afraid that if they think I ask a stupid question, you see. So I guess then I just leave it, I don't bother with it, but I realize that I should do that because if I do that, then I get the benefit of what I need for understanding and possibly get a better grade if I understand things more.*"

Secondly, they were embarrassed when another deaf student's behavior reinforced this real or perceived prejudice, as illustrated by the following:

"*There are some cases in the classroom where a deaf student will raise their hand and ask a really stupid question--something the teacher just talked about for 30 minutes. They*

get very embarrassed, wondering if the hearing people would stereotype all of us just because that one deaf person asked a really stupid question. I get very embarrassed when they do that. I think oh, my goodness, I don't believe they're asking that question."

In such cases, informants are embarrassed not only for the other student, but for themselves. They seemed to feel that the behavior of one student reflected on them all. In short, these informants worried about how they would be judged individually for their own actions and how they would be judged by association for the actions of others.

Not surprisingly, a third result of informants' concern for how they appeared to others was expressed as a drive or motivation to prove themselves to hearing people. Interestingly, this motivation has two subtle components. Informants said they wanted to show what deaf people could do, but they also wanted to distinguish themselves from the group, to show that they were not like most other deaf students. The following quotations are illustrative:

"*Some hearing students think that deaf students are behind, lower level. And I like showing that deaf students are very capable, kind of breaking the barrier, and I do that a lot. Like, if I do well, I ruin the class curve for the quarter. And I like to show that the deaf student can do above average and surprise them. So deaf students are very able to do it just as you, or better, and I think it happens sometimes that they've been embarrassed.*"

"*In high school I also had to show hearing that I was not like all those other deaf.*"

In summary, while informants welcomed the opportunity to attend RIT classes and felt they were successful within them, their comments also included descriptions of separation and at times even isolation from the mainstream teaching and learning process. Analyses of their comments reveal specific constraints on integration within the classroom, including the

physical grouping of deaf students, the use of support services, and perceptions of themselves and others.

Social Interactions and Relationships

Informants were asked to describe their social life at RIT, including participation in clubs, friendships with other students, and dating. In particular, they were asked to discuss their interactions and relationships with hearing students. Their comments include descriptions of the ways in which deaf and hearing RIT students interact and the types of relationships they develop, as well as explanations for these relationship patterns.

Descriptions of Social Interactions and Relationships. Four broad categories emerged from analysis of informants' descriptions of social interactions and relationships with hearing RIT students. These are rejection (essentially negative interactions), separate worlds (neutral), acquaintanceship (casual but positive interactions), and friendship (close, positive relationships).

Several informants described instances of rejection in recounting interactions with hearing peers. Sometimes this rejection was generalized to all deaf students, as reflected in the use by some hearing students of the derogatory slang term "NIDS" in reference to deaf RIT students (the term is derived from the acronym NTID). In other instances, the rejection was more personalized. In the following example, an informant recalls his efforts to join a hearing fraternity, and his interpretation of why he was turned down:

> *Informant:* "*After I tried joining [hearing] fraternities, they rejected me because of my communication. I tried a second time and they rejected me again... because of my communication. A lot of hearing people don't like deaf people that much if they don't have good communication. They won't interact with them.*"
> *Interviewer:* "*So you decided to go through the rush process... you went to the open house?*"
> *Informant:* "*Yeah. They have parties. I went in there. I have a friend there who's deaf, but his communication is*

probably better than me, so they accepted him 'cause his communication is better than me."
Interviewer: "How do you feel about that?"
Informant: "I felt bad that hearing people don't respect deaf people."
Interviewer: "Your friend, the person who got in... did he explain why they did not accept you?"
Informant: "Yeah, he said it was my communication."

Another informant describes how she decides whether to pursue an interaction with a hearing person, and the impact of social rejection:

Informant: "I feel I always have to make the move to talk to them [hearing students]. I felt maybe they were afraid. Some of them say, 'Gee, I didn't know you could talk.' Some of them at a party maybe. Sometimes, I can feel like they're getting cold, so I kind of back off. If I see they're uncomfortable, I'll leave them alone. I don't want them to look or feel stupid. I don't want to bother them. I won't to be bothered either."
Interviewer: "Can you think of some specific experience when you tried to approach someone and then you felt that they were becoming cold...?"
Informant: "Well, I was walking the quarter mile [name of a well-traveled route on campus] talking to one girl and I said, 'Are you ready for class?' She said, 'Well, yeah.' I said, 'How do you feel in the class?' She said, 'Okay,' and she kept on walking a little faster. I said, 'Okay, I'll see you later.' And I just kept going. I feel bad, but I don't let it bother me; just let her go. Somebody else is out there looking for somebody like me. If they want to act funny, well, go on--let them be by themselves... Sometimes, you feel lousy, down in the dumps. Sometimes, people make you feel like a piece of--you know, but you just have to go on. Take the pain. Everybody's not nice."

The category of "separate worlds" is perhaps the most reflective of informants' perceptions of their social interactions at RIT. This category

includes descriptions offered by many informants of a fundamental gap or barrier between deaf and hearing students leading to parallel social networks. The major difference between the categories of social rejection and separate worlds is the tone of neutrality and acceptance which pervades informants' descriptions of the latter. As one person put it, "See, I don't exactly reject them [hearing students] and I know they don't exactly reject me, but we just know that we're wasting our time." Other descriptions of the separation of deaf and hearing students into different social worlds are as follows:

> "*Most deaf people go together in the deaf world, and the hearing world kind of gets together.*"

> "*For the most part, I don't think the hearing people necessarily all reject us or accept us. It's more they're here, they're students--I'll leave them alone and they'll leave me alone. It's more of a neutral situation, just walking by each other. I don't think the hearing people have much of a desire to make friends with the deaf. They have their own peers. Same with the deaf people. We don't really [have] a desire to make hearing friends because they have their own peers. What I really see is two groups of people that mix but don't pay a lot of attention to the other group.*"

In spite of this social separation, informants did recall positive interactions with hearing students, best described as acquaintanceships. The term "acquaintanceship" is used here to convey the temporary and/or relatively casual nature which characterized most informants' descriptions of relationships with hearing peers. Some examples:

> "*...I would make hearing friends but it never lasted very long. Maybe we'd sit and eat lunch together. We'd talk. We'd get along and then one day it was gone. Very short stints and very short relationships.*"

> *Interviewer:* "*Do you feel that you have good close communication with your hearing friends?*"

Informant: "*Not that close, but pretty good. Like ask her [hearing friend] to tell me about her boyfriend and I say 'Oh, I'm sorry to hear that.' The next... time I see her, 'How's your boyfriend?' and I'll tell about my past experience. Something funny that happens, or a joke. Tell her what happened with the project, what did you do last weekend, what did you do this weekend, do you want to go to a party... It's very surface, surface conversation. But it goes well.*"

While close friendships with hearing students were rare, they did occur. These friendships were usually qualified by the informant as special, that is, not typical of their general experience with hearing people. For example, one informant spoke of close ties to his hearing "brothers" in a campus fraternity. He recalled that they were willing to repeat their conversation for him... "they went out of their way a little bit--it made me feel good." Several others said they became friends with hearing students who expressed an interest in learning sign language or provided specific academic support services, such as notetaking or tutoring. One woman said she moved comfortably in circles of deaf and hearing friends. In the following quotation, an informant offers his description of a "true" hearing friend:

Interviewer: "*You said you've had a hard time making hearing friends here. Do you have any hearing friends?*"
Informant: "*Yeah, I have some, about five, not including teachers, but students....*"
Interviewer: "*Tell me about the... hearing friends, how did you [meet] them, from classes or from the dorm or clubs?*"
Informant: "*A few of them through classes... they were like the notetakers or they're the ones who had a really special personality that knew what deaf people are like. They understand and they see that as a problem. They understood that RIT people don't want to be bothered with deaf people. He understood that and he knew it was wrong. That's a true friend.*"

Most often, however, informants described friendships with hearing students in contrast to friendships with deaf peers. Almost every distinction between friendships with hearing students and those with deaf students involved differences in the depth, quality, or endurance of the relationship. Often, the discussion came down to a distinction between "good" friends and "best" friends. With very few exceptions, best friends were always deaf. For example:

> "*They [hearing students] were good friends, but how do you define good friends, you know? I guess if I used the word "best friends," you know, my best friends would be hearing-impaired people and my good friends would be hearing people. You know, there's a difference. I just don't... know why, subconscious maybe, I just don't let myself go beyond the point of becoming too chummy with hearing people. It's just that I guess we both draw a line to each other. It works both ways.*"

In summary, most descriptions of informants' interactions and relationships with hearing peers fall into the categories of separate worlds and acquaintanceship. Their comments suggest that, for them, close and sustained friendships with hearing students are rare. Instead, they tend to rely more on social networks of deaf peers and participation in deaf clubs and social activities for deeper friendships.

Explaining the Relationship Patterns. Informants were asked to explain their choices of friends and their reasons for participating in essentially separate social networks. Their explanations include such variables as opportunity, ease and comfort of interaction, group identification, and social prejudice.

Informants said that one of the main reasons they associate with deaf peers is that the RIT campus presents them with the opportunity to do so. Usually, this explanation is closely tied to the individual history of the informant. For example, some informants who had attended residential schools for the deaf said they interact with deaf students because they are accustomed to doing so. Interestingly, students from mainstream high schools placed even greater emphasis on the importance of opportunity and

choice in explaining their decision to associate largely with deaf peers. In the following quotation, an informant describes the benefits of meeting deaf people who had attended mainstream high schools:

> *Informant:* "*I learned a lot since I have been here. I was able to open up more. It is a good experience to be in NTID for one thing. Meeting people who had the similar problems as I had.*"
> *Interviewer:* "*So that helped you.*"
> *Informant:* "*Tremendously. I am a different person now.*"
> *Interviewer:* "*Why did it make such a big difference?*"
> *Informant:* "*Because I keep hearing the same problems that they had. It turned out that about four of five of them who had the same background as I do... they [had] the same experience as I did in high school... they were lonely, they didn't have a lot of friends. I thought, my god, I am not the only one, then.*"
> *Interviewer:* "*So before you met them you thought maybe you were the only person [with those feelings?]*"
> *Informant:* "*Oh, yes. I was so insecure and everything... it is like a trademark between all of us...*"
> *Interviewer:* "*So how did you feel different after knowing that you weren't the only one? How did it change how you felt when you were with hearing people?*"
> *Informant:* "*[I have] a lot more confidence with myself. I was able to express myself more without worrying about what they would think of me.*"

Other informants who had attended mainstream high schools found in RIT a kind of "oasis," a respite from the social isolation they had experienced in high school and which they expect to face after leaving college. The following quotations are illustrative:

> "*My fraternity is a hearing-impaired fraternity. I'm sure you're gonna ask why it's a hearing-impaired fraternity and rather not a hearing one. I grew up in hearing society and*

now, I wanna grab all the time being with the hearing-impaired people. It's kind of once-in-a-lifetime opportunity. I just wanna grab it before I go back to the real world where I belong, the working world, the daily home life."

"A lot of it has to do with my past. I failed so often in trying to make hearing friends. I've noticed I'm not really trying as hard as I used to because I have deaf friends and I'm more satisfied. I have friends--I don't have to try any more. In [the mainstream] high school, I was desperate--I had nobody and I'd try everything I could. But here at NTID, I have all these deaf friends. I have more of an attitude of, well, here's a hearing person. I'd like to meet him, but I'm afraid to hurt myself. Maybe they'll reject me again. I've been rejected so many times, I'm not sure I wanna do it again."

Students said that ease and comfort of interaction was another reason why they chose to interact with deaf peers. Sometimes differences of linguistic mode present obvious communication barriers to deaf and hearing students. In other cases, the barrier is more subtle. For example, several informants note that communication with hearing students is more time consuming than communication with deaf peers. As illustrated in the following story, even when hearing students are willing to learn sign language, the pressures of school work may still render the interaction too costly:

"When I became representative at large and president of NTID Student Congress, there were some [hearing] people who really [cared] enough to talk with deaf people around them. Because they know that they have to work with me and they were willing to learn sign language and try to... understand what I'm saying... but at the end of my term, it's right back to the same old thing. The people left and graduated, those good ones. So, it's sad. And if you really want to meet a lot of hearing people and get to know 'em more, you have to give up a lot of

study time for school. That's something I can't do anymore. That's what I used to do, but [now] I can't."

Another informant suggested that fear of failure or social discomfort prevents interactions between deaf and hearing students:

"*I see a lot of separation between deaf and hearing. I know they want to communicate and meet but they're afraid... I think they're afraid to communicate and get nervous and afraid that they'll say the wrong thing. They'll misunderstand or hurt each other when they don't mean to, so they just leave it alone. There could be diamonds in there [the relationship, they should] find out what it's like.*"

Group identification is a third explanation offered by informants for their relationships with deaf peers. The concept of group identification includes a sense of community and shared perspective, often correlated with similarities in background and life experience. As one person put it, "I like being with... hearing-impaired people, because we have an understanding." Some other examples:

"*I'm hearing impaired, my friends are hearing impaired, we're all going through the same thing, we understand our limitations and our problems, while these hearing students have different problems and different limitations...*"

"*I never really had a good relationship with a hearing girl. I've had relationships but it was never right because it would always come to a problem--she would have hearing friends and I would have deaf friends and we would have a hard time, you know, going the other way. With a hearing-impaired girlfriend... it's so much easier because we both have the same kind of friends.*"

Lastly, informants said that social prejudice contributed to their alienation from hearing students. For example, several described instances

in which rejection by hearing peers was based on stereotypes of deaf people. In the following quotation, an informant describes his rejection by hearing students who assume that all deaf people are the same. Ironically, he has made the same generalization, as illustrated by his description of "special deaf people":

> *Informant: "... I have a hard time making hearing friends. It's because of the history. There's a lot of, I hate the word "dumb," but different deaf people, maybe sort of typical deaf people, special deaf people. When they see the deaf people coming from the deaf schools and their behavior--because they had no role models or the way they make their voice sounds--the hearing people look at them and think that I'm like them, like I'm in the same category as them, [that] I'm one of the NIDS, stupid."*

This young man's comment is especially significant because it reflects a pattern of stratification and social subgrouping within the deaf student population which emerged across the interviews. Informants routinely made distinctions between oral communication versus signing, deafness versus hearing impairment, and mainstream versus residential school backgrounds in their discussions of social relationships at RIT. For example, communication and interaction among deaf students was not always easy or smooth, and sometimes deaf students avoided or rejected each other on the basis of these differences. Conversely, informants tended to select as friends those deaf students with similar educational backgrounds and communication styles. The following quotations are illustrative:

> *"I have to admit almost all of my friends here at NTID are students who come from oral backgrounds, went to oral schools and grew up orally. NTID is their first deaf experience. Most of my friends are like that."*

> *"I notice the oral students tend to talk with people who are oral and many deaf people, when they're signing, tend to all be together. Sometimes, the oral people will be involved with the*

deaf people and sign. If the oral students improve their sign, then they'll make deaf friends with those who sign. Like there's a separation and then a mixing and a molding with the older students. Like the third year students are really together. But the first, second, and third year students are kind of separate, then they mold."

"I could see it almost on the very first day, that if you were oral, they'd look at you funny and walked away. I could see it happen with some other people. Also, I didn't know which one was oral and which one needed sign, so I used sign with everyone until I got to know them better. In a way, I escaped from that rejection."

Interviewer: "Did you know any signs when you came here?"
Informant: "No."
Interviewer: "Oh wow! You had to start from stratch. How did that go for you?"
Informant: "Terrible. A lot of people who are deaf people didn't accept me at all. I felt even more lonely. Realizing that even in the hearing world and the deaf world is not right for me.... But then, after I started to meet some other hard-of-hearing people like me, it got a little better for me."

Clearly, deaf students are not a homogeneous group, nor does having a hearing impairment insure acceptance by or friendship with deaf peers. Informants' comments suggest that the range of interactions and relationships between deaf and hearing students (that is, rejection, separate worlds, acquaintanceship and friendship) can also be used to describe interactions among deaf students. Similarly, the variables discussed by informants in explaining their tendency to associate more with deaf than hearing peers can also be used to explain their relationship patterns within the deaf student population. While it is beyond the scope of this study to explore stratification and subgroupings within the deaf student population in detail, it is important to note that such variety exists.

In summary, informants' explanations for their friendship patterns include increased opportunity to meet deaf peers, ease and comfort of interaction with deaf students, the importance of group identification, and the negative influence of social prejudice. In combination, these factors or conditions create a climate in which informants perceive both themselves and hearing students as lacking the motivation to pursue relationships with each other. Motivation includes interest, patience, and willingness of both parties to make the relationship work. As noted earlier, some informants had experienced rejection in past interactions with hearing peers, and as a result were reluctant to persist in their efforts to become friends with hearing students at college, especially in light of the many opportunities for interaction with deaf peers at RIT. Others focused their explanations on the greater level of comfort and potential for individual growth which they found in relationships with deaf students. While we did learn about some hearing students who were willing to take the time and invest the energy in a relationship with a deaf peer, the perception of many of our informants was that this was the exception rather than the rule. Within this climate, informants described social interactions with deaf peers as frequently more rewarding and easier to initiate and sustain than those with hearing students. In the following pages, the findings from this and the earlier section on classroom experiences are discussed.

DISCUSSION

RIT is in some ways a unique educational environment. However, it also shares important characteristics with a variety of secondary and postsecondary school settings in which deaf students are served. For example, while few educational settings serve as many deaf students as RIT, there are many secondary and postsecondary programs which bring deaf students together in large enough numbers to permit the development of individual and group interaction within the deaf population. RIT offers deaf students a range of classroom opportunities, including fully mainstreamed classes as well as self-contained classes through the National Technical Institute for the Deaf. Some of the larger postsecondary programs offer deaf students similar options, as do metropolitan or surburban secondary schools which serve large numbers of deaf students. RIT provides support services to

deaf students in mainstream classes. Similarly, there are growing numbers of both secondary and postsecondary programs which offer a range of services to deaf students. In short, it is possible to find in the RIT environment many elements which also appear within other educational settings serving large numbers of deaf students. While we would not propose to generalize from the experiences of our informants to all hearing-impaired students in mainstream settings, we would suggest that some of their experiences may not be unique to these students or the RIT environment. In this spirit, we offer the following observations and comments on the findings of this study.

First, classroom learning involves more than access to formal instruction. To be integrated into the classroom teaching/learning process, the successful student must also be able to actively participate in the exchange of ideas and information which occurs through classroom discussion and the informal communication networks which develop among students and between the students and instructor. The deaf students we interviewed were able to access mainstream classroom instruction by using the support services of interpreters, notetakers, and tutors. However, while these supports are essential to their presence and success within the mainstream class, they could not replace the direct communication enjoyed by the hearing students in these classes or by deaf students in classes with instructors who sign for themselves. In fact, informants described instances in which the use and reliance on support services served to distance them from the instructors, other students, and the exchange of information. For example, as noted earlier in the section on findings, informants perceived their physical grouping at the front or side of the class as having a negative impact on their integration into the class. This finding, based on students' perceptions of their own experiences, is interesting in light of the findings from an observational study by Saur, Popp, and Isaacs (1984) in which it was concluded that, unless an "action zone" exists within the classroom, the physical placement of deaf students does not necessarily restrict their participation. Additionally, informants described constraints on participation in class associated with perceptions of their competence and assessment of how their performance would be viewed by others, a perspective consistent with the results of an interview study conducted by Saur, Layne, and Hurley (1982), in which deaf students identified feelings of

shyness, fear of facing the group, and fear that their questions will be off the point as factors which contribute to a lack of class participation.

These findings have implications regarding the student's ability to access the total milieu of the classroom. For example, this distancing may be critical when the teaching behaviors of the classroom instructor are particularly effective. Perry and Dickens (1984) found that a high expressive teacher can generate significant achievement gains over a low expressive teacher. Observable behaviors such as movement, voice intonation, eye contact, and humor may cue selective attention. Unless the interpreter can capture and convey these same cues, hearing-impaired students may be at an instructional disadvantage compared to their hearing peers.

The distancing described by informants may also pose a threat to the student's engagement in the learning process. Corno and Mandinach (1983) discuss four forms of cognitive engagement in the classroom: self-regulated learning, task focus, resource management, and recipience. While students appear to use alternate forms of engagement, successful students tend to rely more heavily on the first two types. In contrast, the comments of our informants suggest that their learning environment biases them toward the other two forms of engagement: resource management, which involves reliance on others for help; and recipience, which is a more passive response to the learning environment. Being engaged in self-regulated learning implies that students are actively involved processing and transforming the information to be acquired and have some sense of control, or autonomy, over their own learning. Our students' comments indicated that their involvement in the classroom is somewhat indirect and that some learning decisions are out of their control. For example, students were denied certain choices, such as: attending class or paying attention if they were the only deaf person requiring the services of an interpreter, being selective in taking notes, and seeking out particular individuals for discussion and collaboration. In addition to losing some freedom of choice, students are constrained from assuming full responsibility for their own learning.

Recent research has emphasized the role of task engagement and active processing in achievement and motivation. For example, Connell, Wexler, and Dannefer (1986) found that students who have more autonomy are more engaged in learning, and Grolnick & Ryan (in press) found that the conceptual integration of material is facilitated by autonomy-supportive

conditions. If autonomy is a strong force in a deaf student's engagement in the learning process and in subsequent learning, learning will suffer to the extent that these students cannot assume more control. This possibility demands more attention in future research endeavors.

Further, the students we interviewed were socially segregated within the class. They tended to sit alone or with other deaf students and rarely engaged hearing students in casual conversation or sought them out for activities involving groups or partners. They seldom participated in class discussions and frequently felt that the hearing students were looking down on them. In fact, it might be said that they formed a parallel social network within the mainstream class similar in purpose and structure to the separate social worlds developed by students through interactions with peers outside the classroom. Within this parallel classroom group, deaf students offered each other the academic and social support, camaraderie, competition, and sense of belonging which they were unable to attain through interactions with hearing classmates. This group identification may enable the students to cope with their perceptions that hearing peers have non-contingent negative opinions of their academic skills and performance. For example, application of Connell's (in press) work on self-system processes to the findings of this study suggests that if hearing-impaired students have feelings of low relatedness with the hearing students, the negative views of the latter will have less of an impact than if they had feelings of high relatedness. In a similar vein, a recent study by Epstein and Feist (1988) indicates that identification with others mediates the relation between self-ratings and ratings of others. They suggest that the individual's self-esteem will not be damaged by the derogatory views of others if others are evaluated negatively by the individual.

While we have made no attempt to correlate these feelings of separation with the academic and personal/social achievement of our informants, we would suggest that those studies which have as their goal the assessment of deaf students' achievement in mainstream classes take these factors into account, especially considering the fact that students' interpretations of themselves and others figure strongly in most current theories of motivation. There is also evidence that some classroom organization and management techniques minimize the effects of isolation for students. For example, based on their comprehensive review of the literature, Johnson and Johnson (1986)

conclude that cooperative--as opposed to individualistic or competitive--learning experiences promote higher levels of intergroup acceptance. Other strategies which can be used by students and/or instructors to facilitate classroom interaction and participation include the recruitment of natural communities of reinforcement for appropriate social behavior (Gresham, 1986) and the creative use of seating arrangements to facilitate communication (Saur, Layne, Hurley and Opton, 1986).

Secondly, our findings strongly support the position of Gresham (1986), Antia (1984), and others that physical presence and proximity do not insure interaction between deaf and normally hearing students, either within or outside the classroom setting. Most of the students interviewed for this study spent many hours on campus and in classes with hearing peers, without significant interaction or the development of close friendships. While they appreciated the opportunity to attend a "hearing" college, they did not generally feel that their attendance at a mainstream school had resulted in meaningful relationships with hearing students.

Ironically, the same conditions which facilitate placing deaf students on campus and in classes with hearing peers also make possible the development of separate social networks. For example, the interpreter services which provide deaf students access to formal instruction also raise barriers to such interaction by encouraging the grouping of deaf students to use a single interpreter. Similarly, the large population of deaf students on the RIT campus, intended to facilitate the development of comprehensive support services and give deaf students opportunities to meet each other, also provides deaf students with peers in sufficient numbers that they can have a full social life separate from hearing students.

It is important to note that the development of separate social networks within or outside the classroom should not necessarily be viewed as bad. The students we interviewed were for the most part quite satisfied with the educational and social opportunities available to them at RIT. The fact that their descriptions of interactions with hearing peers were more often reflective of separate worlds and acquaintanceships than of rejection suggests that these students did not see themselves as victims of chronic discrimination or hostility by hearing students or instructors. If anything, their comments reflect an attitude of "live and let live." Moreover, it is not clear that these students would have been more fully integrated if they had

attended colleges where they were the only or one of a handful of deaf students. Rather, it is more likely that they would have experienced the same separation from hearing peers in these settings as they did at RIT, but without the alternative of association with deaf peers.

On the other hand, the separation of students into deaf and hearing groups raises other issues which should concern all educators. For example, such segregation promotes an attitude of "us-them," and makes possible group stereotyping such as that reflected in the slang term "NIDS." Also, some students recalled experiences prior to arrival at RIT involving rejection by hearing people. Their attraction to deaf peers must therefore be viewed within the context of individual life histories--did they feel this way because they were tired of fighting the indifference and social rejection of hearing people, or was it because they found a fundamentally more satisfying alternative within the deaf student population? Other research, which has focused on the role of social alienation and peer identification in the formation of the deaf community (Foster, in press), would suggest that the answer to this question is "probably both."

RIT cannot be described as a fully integrated campus. Rather, it is a setting in which deaf students are offered a range of alternatives for academic and social growth. It also provides a fertile environment for the study of interactions between deaf and hearing students. Bogdan and Taylor (forthcoming) note that most of the research on interactions between people with disabilities and non-disabled people has focused on the process by which disabled people are labeled and treated as "deviant." They call for more work in an area which they describe as the "sociology of acceptance" in which the focus is on positive, close relationships between people with disabilities and non-disabled people. We agree, and recommend that further research be done to learn more about how positive interaction between deaf and hearing students can be facilitated, both within and outside the classroom. Of particular interest is the study of friendships between deaf and hearing students. Although they seem to be rare, such relationships do occur, and it would be interesting to learn more about them, including how they are initiated and sustained.

Finally, the results of this project support a multi-dimensional approach to the study of mainstreaming, which includes formal as well as informal activities within the school environment. Much of current educational policy

and practice revolves around the formal dimensions of mainstreaming. Certainly this is true in the mainstreaming of deaf students, in that most efforts to date have been on providing deaf students physical access to the mainstream class and technical support to facilitate formal classroom instruction. The findings of this study suggest that informal dimensions of mainstreaming, such as individual interactions with non-disabled teachers and peers, development of group identity, friendships, and social integration, are also essential to the academic as well as personal/social growth of the student, and as such demand our attention, concern, and resources.

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